

**Table 2.2-3a**  
**Chemical-Specific ARARs for Remedial Action at the Portland Harbor Superfund Site**

Medium	Regulation/Citation	Criterion/Standard	Comments
Protection of surface water	Clean Water Act, 33 USC 1313 and 1314. Most recent 304(a) list, as updated up to issuance of the ROD	Under Section 304(a), minimum criteria are developed for water quality programs established by states. Two kinds of water quality criteria are developed: one for protection of human health, and one for protection of aquatic life.	Relevant and appropriate for cleanup standards for surface water and contaminated groundwater discharging to surface water if more stringent than promulgated state criteria. Relevant and Appropriate to short-term impacts from dredging and capping if more stringent than promulgated state criteria. Relevant and Appropriate as criterion to apply to point source discharges used in implementing the remedy, if applicable.
Protection of potential drinking water sources	Safe Drinking Water Act, 42 USC 300f, 40 CFR Part 141, Subpart O, App. A. 40 CFR Part 143	Establishes Maximum Contaminant Level Goals (MCLGs) and Maximum Contaminant Levels (MCLs) to protect human health from contaminants in drinking water.	Relevant and Appropriate as cleanup standards for groundwater and surface water at Portland Harbor, which are potential drinking water sources.
Measure of protectiveness of human health and the environment in all media	Oregon Environmental Cleanup Law ORS 465.315. Oregon Hazardous Substance Remedial Action Rules OAR 340- 122-0040(2)(a) and (c), 0115(2-6).	Sets standards for degree of cleanup required for hazardous substances. Establishes acceptable risk levels for human health at $1 \times 10^{-6}$ for individual carcinogens, $1 \times 10^{-5}$ for multiple carcinogens, and Hazard Index of 1 for noncarcinogens; and protection of ecological receptors at the individual level for threatened or endangered species and the population level for all others.	A risk-based numerical value that, when applied to site-specific conditions, will establish concentrations of hazardous substances that may remain or be managed on-site in a manner avoiding unacceptable risk.
Protection of surface water	Water Pollution Control Act ORS 468B.048. Water Quality Standards OAR Part 340, Division 41	DEQ is authorized to administer and enforce CWA program in Oregon. DEQ rules designate beneficial uses for water bodies and narrative and numeric water quality criteria necessary to protect those uses. OAR 340-041-0340 designates and defines the beneficial uses that shall be protected in the Willamette Basin.	Oregon's numeric toxics water quality standards (Tables 30 and 40) are applicable requirements as cleanup standards for surface water to the extent they are more stringent than Clean Water Act 304(a) recommended criterion. All state water quality standards, including numeric, narrative, and designated uses, are applicable requirements for any discharges to surface water from point sources and activities that may result in discharges to waters of the state, such as dredge and fill, de-watering sediments, and other remedial activities. All state water quality standards are applicable to measuring controls on contaminated groundwater discharging to the Willamette River.

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**Table 2.2-3b**  
**Action-Specific ARARs for Remedial Action at the Portland Harbor Superfund Site**

Action	Regulation/Citation	Criterion/Standard	Comments
Actions that discharge dredged or fill material into navigable waters	Clean Water Act, Section 404 and Section 404(b)(1) Guidelines, 33 USC 1344, 40 CFR Part 230	Regulates discharge of dredged and fill material into navigable waters of the United States.	Applicable to dredging, covering, capping, and designation and construction of in-water disposal sites and in-water filling activities in the Willamette River.
Actions that discharge pollutants to waters of U.S.	Clean Water Act, Section 402, 33 USC 1342	Regulates discharges of pollutants from point sources to waters of the U.S., and requires compliance with the standards, limitations and regulations promulgated per Sections 301, 304, 306, 307, 308 of the CWA.	Relevant and Appropriate to remedial activities that result in a discharge of pollutants from point sources to the river if more stringent than state promulgated point source requirements.
Actions that discharge pollutants to waters of U.S.	Clean Water Act, Section 401, 33 USC 1341, 40 CFR Section, 121.2(a)(3), (4) and (5)	Any federally authorized activity which may result in any discharge into navigable waters requires reasonable assurance that the action will comply with applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of the Clean Water Act.	Relevant and Appropriate to implementation of the remedial action that results in a discharge to the river if more stringent than state implementation regulations.
Actions resulting in discharges to waters of the State of Oregon, including removal and fill activities	Water Pollution Control Act ORS 468B.048 Regulations Pertaining to NPDES Discharges OAR 340-041, 340-042	Effluent limitations and management practices for point-source discharges into waters of the state (otherwise subject to NPDES permit but for on-site permit exemption).	Applies state water quality standards and effluent limitations to point-source discharges to the Willamette River.
Actions resulting in discharges to waters of the State of Oregon, including removal and fill activities	Certification of Compliance with Water Quality Requirements and Standards ORS 468b.035, OAR 340-041, 340-042, 340-048	Provides that federally-approved activities that may result in a discharge to waters of the State requires evaluation whether an activity may proceed and meet water quality standards with conditions, which if met, will ensure that water quality standards are met.	Applicable to implementation of the remedial action (e.g., dredging, capping, and construction of confined disposal facility) that may result in a discharge to waters of the State.
Actions resulting in discharges to waters of the State of Oregon, including removal and fill activities	ORS 196.825(5) -Statutory requirement to require mitigation. Implementing rules: OAR 141-085-510, 141-085-680, 141-085-0685, 141-085-0690, 141-085-0710, 141-085-715.	Substantive requirements for mitigation for the reasonably expected adverse effects of removal or fill in a project development in waters of the state, including in designated Essential Indigenous Anadromous Salmonid Habitat.	Applicable to remedial action dredge and fill activities, capping, and riverbank remediation.

**Table 2.2-3b**  
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Action	Regulation/Citation	Criterion/Standard	Comments
Actions in federal navigation channels	River and Harbors Act, 33 USC 401 et seq. 33 CFR parts 320 to 323	Section 10 prohibits the unauthorized obstruction or alteration of any navigable water. Structures or work in, above, or under navigable waters are regulated under Section 10.	Applicable requirements for how remedial actions are taken or constructed in the navigation channel.
Transportation of hazardous waste off-site	Resource Conservation and Recovery Act. 40 CFR 260, 261	Establishes identification standards and definitions for material exempt from the definition of a hazardous waste.	Applicable to characterizing contaminated media or hazardous wastes generated from the action and designated for off-site or upland disposal; potentially relevant and appropriate for use in identifying acceptance criteria for confined in-water disposal.
Transportation of hazardous waste off-site	Resource Conservation and Recovery Act. 40 CFR 260, 262	Includes manifest, record-keeping, and other requirements applicable to generators of hazardous waste.	Applicable to remedial actions that involve the transport of hazardous materials (i.e., dredged material)
Transportation of hazardous waste off-site	Resource Conservation and Recovery Act. 40 CFR 263	Sets forth standards for transporters of hazardous wastes, including receipt of an EPA identification number and manifesting requirements.	Relevant and appropriate for remedial actions that involve the transport of hazardous materials (i.e., dredged material).
Transportation of and storage and disposal of hazardous waste off-site	Resource Conservation and Recovery Act. 40 CFR 264 and 265	Management standards including record keeping, requirements for particular units such as tanks or containers, and other requirements applicable to owners and operators of hazardous waste treatment, storage and disposal facilities.	Relevant and appropriate to remedial actions that involve the off-site transport of hazardous materials for storage and/or disposal (i.e., dredged material).
Disposal of samples and remedial waste	Resource Conservation and Recovery Act. 40 CFR 268	Places land disposal restrictions, including treatment standards and related testing, tracking and record keeping requirements on hazardous waste.	Applicable for waste generated from remedial process and analyzed samples transported off site for disposal.
Upland and in-water disposal of dredge material	RCRA – Solid Waste. 40 CFR 257 Subpart A	Establishes criteria for determining which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health or the environment.	RCRA Solid Waste requirements may be relevant and appropriate to remedial actions that result in upland or in-water disposal of dredged material. Requirements for the management of solid waste landfills may be relevant and appropriate to upland disposal.
Transportation of hazardous waste off-site	Hazardous Materials Transportation Act. 49 USC §5101 et seq. 40 CFR Parts 171-177	Establishes requirements for acceptance and transportation of hazardous materials by private, common, or contract carriers by motor vehicle.	Hazardous Materials Transportation Act requirements are applicable to remedial actions that involve the transport of hazardous materials (i.e., dredged material).
Onsite treatment, disposal, storage of hazardous waste	Hazardous Waste and Hazardous Materials II. ORS 466.005(7) OAR 340-102-0011 - Hazardous Waste Determination	Defines "Hazardous Waste" and the rule contains the criteria by which anyone generating residue must determine if that residue is a hazardous waste.	Specifies substantive requirements if remedial action will involve on-site treatment, disposal, or storage of RCRA-listed or characteristic hazardous waste. (Note: off-site treatment, storage, or disposal subject to all administrative and substantive state requirements.)

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Action	Regulation/Citation	Criterion/Standard	Comments
Onsite treatment, disposal, storage of hazardous waste	Hazardous Waste and Hazardous Materials II. Identification and Listing of Hazardous Waste OAR 340-101-0033	Identifies additional residuals that are subject to regulation as hazardous waste under state law.	Specifies requirements if remedial action will involve on-site treatment, disposal, or storage of additional listed wastes.
Onsite treatment, disposal, storage of non-hazardous waste	Solid Waste: General Provisions. ORS 459.005, OAR 340-093, 340-094	Substantive Requirements for the location, design, construction, operation, and closure of solid waste management facilities.	Applicable if upland disposal facility contemplated on-site for solid, nonhazardous, waste disposal, handling, treatment, or transfer. (Note: off-site transfer, treatment, handling, or disposal subject to all administrative and substantive state requirements.)
Onsite treatment, disposal, storage of non-hazardous waste	Solid Waste: Land Disposal Sites Other than Municipal Solid Waste Landfills ORS 459.015, OAR 340-095	Requirements for the management of solid wastes at land disposal sites other than municipal solid waste landfills.	Applicable to the on-site management and disposal of contaminated sediment, soil, and/or groundwater.
Actions handling PCB remediation wastes and PCB containing material	Toxic Substances Control Act, 15 USC §2601 et seq., 40 CFR Part 761.60-761.79	Establishes requirements for handling, storage, and disposal of PCB-containing materials, including PCB remediation wastes, and sets performance standards for disposal technologies for materials/wastes with concentrations in excess of 50 mg/kg. Establishes decontamination standards for PCB contaminated debris.	TSCA requirements are applicable to the handling of contaminated material, debris, or surface water with PCB contamination.
Risk-based limits protective of human health for air emissions associated with soil or sediment removal	Clean Air Act, 40 CFR Parts 50 and 52	Air emissions from stationary and mobile sources that may be generated that creates threats to human health as defined in the regulations.	Relevant and Appropriate to remedial activities that generate air emissions.
Actions generating air emissions	Oregon Air Pollution Control ORS 468A et. seq., General Emissions Standards OAR 340-226	DEQ is authorized to administer and enforce Clean Air program in Oregon. Rules provide general emission standards for fugitive emissions of air contaminants and require highest and best practicable treatment or control of such emissions.	Applicable to remedial actions taking place in on-site uplands. Could apply to earth-moving equipment, dust from vehicle traffic, and mobile-source exhaust, among other things.

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Action	Regulation/Citation	Criterion/Standard	Comments
Actions generating air emissions	Fugitive Emission Requirements OAR 340-208	Prohibits any handling, transporting, or storage of materials, or use of a road, or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from becoming airborne. These rules for "special control areas" or other areas where fugitive emissions may cause nuisance and control measures are practicable.	Applicable to remedial actions taking place in on-site uplands. Could apply to earth-moving equipment, dust from vehicle traffic, and mobile-source exhaust, among other things.
Actions that may affect fish and wildlife	Fish and Wildlife Coordination Act. 16 USC 662, 663 50 CFR 6.302(g)	Requires federal agencies to consider effects on fish and wildlife from projects that may alter a body of water and mitigate or compensate for project-related losses, which includes discharges of pollutants to water bodies.	Potentially applicable to determining impacts and appropriate mitigation, if necessary, for effects on fish and wildlife from filling activities or discharges from point sources.
Presence of protected species	ODFW Fish Management Plans for the Willamette River. OAR 635, div 500	Provides basis for in-water work windows in the Willamette River.	Potentially applicable to timing of implementation of the remedial action due to presence of protected species at the site.
Actions that may affect marine mammals	Marine Mammal Protection Act. 16 USC §1361 et seq. 50 CFR 216	Imposes restrictions on the taking, possession, transportation, selling, offering for sale, and importing of marine mammals.	Applicable to remedial actions that have the potential to affect marine mammals.
Actions that may affect migratory birds	Migratory Bird Treaty Act. 16 USC §703 50 CFR §10.12	Makes it unlawful to take any migratory bird. "Take" is defined as pursuing, hunting, wounding, killing, capturing, trapping and collecting.	Applicable to remedial actions that have the potential to effect a taking of migratory birds.

**Table 2.2-3c**  
**Location-Specific ARARs for Remedial Action at the Portland Harbor Superfund Site**

Location	Regulation/Citation	Criterion/Standard	Comments
Presence of archaeologically or historically sensitive area	Native American Graves Protection and Repatriation Act, 25 USC 3001-3013, 43 CFR 10	Requires Federal agencies and museums which have possession of or control over Native American cultural items (including human remains, associated and unassociated funerary items, sacred objects and objects of cultural patrimony) to compile an inventory of such items. Prescribes when such Federal agencies and museums must return Native American cultural items. "Museums" are defined as any institution or State or local government agency that receives Federal funds and has possession of, or control over, Native American cultural items.	If Native American cultural items are present on property belonging to the Oregon Division of State Lands (DSL) that is a part of the response action area, this requirement is potentially applicable. If Native American cultural items are collected by an entity which is either a federal agency or museum, then the requirements of the law are potentially applicable.
Presence of archaeologically or historically sensitive area	Indian Graves and Protected Objects ORS 97.740-760	Prohibits willful removal of cairn, burial, human remains, funerary object, sacred object or object of cultural patrimony. Provides for re-interment of human remains or funerary objects under the supervision of the appropriate Indian tribe. Proposed excavation by a professional archaeologist of a native Indian cairn or burial requires written notification to the State Historic Preservation Officer and prior written consent of the appropriate Indian tribe.  Prohibits persons from excavating, injuring, destroying or damaging archaeological sites or objects on public or private lands unless authorized.	Potentially relevant and appropriate if archaeological material is encountered.
Presence of archaeologically or historically sensitive area	Archaeological Objects and Sites ORS 358.905-955 ORS 390.235	Imposes conditions for excavation or removal of archaeological or historical materials.	Potentially relevant and appropriate if archaeological material encountered.
Presence of archaeologically or historically sensitive area	National Historic Preservation Act. 16 USC 470 et seq. 36 CFR Part 800	Requires the identification of historic properties potentially affected by the agency undertaking, and assessment of the effects on the historic property and seek ways to avoid, minimize or mitigate such effects. Historic property is any district, site, building, structure, or object included in or eligible for the National Register of Historic Places, including artifacts, records, and material remains related to such a property.	Potentially applicable if historic properties are potentially affected by remedial activities.
Presence of archaeologically or historically sensitive area	Archaeological and Historic Preservation Act. 16 USC 469a-1	Provides for the preservation of historical and archaeological data that may be irreparably lost as a result of a federally-approved project and mandates only preservation of the data	Potentially applicable if historical and archaeological data may be irreparably lost by implementation of the remedial activities.
Presence of floodplain as designated on map	44 CFR 60.3(d)(2) and (3)	Prohibits encroachments that would result in any increase in flood levels during occurrence of base flood discharge.	FEMA flood rise requirements are considered relevant and appropriate requirements for remedial actions.
Presence of floodplain as designated on map	Federal Emergency Management Act, Exec. Order 11988 (1977) 40 CFR Part 6, App. A 40 CFR 6.302 (b)	Requirements for Flood Plain Management Regulations Areas Requires measures to reduce the risk of flood loss, minimize impact of floods, and restore and preserve the natural and beneficial values of floodplains.	Relevant and appropriate for assessing impacts, if any, to the floodplain and flood storage from the response action and developing compensatory mitigation that is beneficial to floodplain values.

**Table 2.2-3c**  
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Location	Regulation/Citation	Criterion/Standard	Comments
Presence of floodplain as designated on map	National Flood Insurance Act and Flood Disaster Protection Act. Executive Order for Floodplain Management, 42 USC 4001 et seq. 44 CFR National Flood Insurance Program Subpart A	Requirements for Flood Plain Management Regulations Areas requires measures to reduce the risk of flood loss, minimize impact of floods, and restore and preserve the natural and beneficial values of floodplains.	Relevant and appropriate for assessing impacts, if any, to the floodplain and flood storage from the response action and developing compensatory mitigation that is beneficial to floodplain values.
Presence of wetlands	Executive Order for Wetlands Protection. Executive Order 11990 (1977) 40 CFR 6.302 (a) 40 CFR Part 6, App. A	Requires measures to avoid adversely impacting wetlands whenever possible, minimize wetland destruction, and preserve the value of wetlands.	Relevant and appropriate in assessing impacts to wetlands, if any, from the response action and for developing appropriate compensatory mitigation for the project.
Presence of state-listed threatened or endangered wildlife species	Protection and Conservation Programs ORS. 496.171 to 496.182. Survival Guidelines OAR 635-100-0135	Survival Guidelines are rules for state agency actions affecting species listed under Oregon's Threatened or Endangered Wildlife Species law.	Substantive requirements of Survival Guidelines relevant and appropriate to remedial activities affecting state-listed species.
Presence of essential fish habitat	Magnuson-Stevens Fishery Conservation and Management Act. 50 CFR Part.600.920	Evaluation of impacts to Essential Fish Habitat (EFH) is necessary for activities that may adversely affect EFH.	Potentially applicable if the removal action may adversely affect EFH.
Presence of federally endangered or threatened species, as designated in 50 CFR 17.11 and 17.12 or critical habitat of such species listed in 50 CFR 17.95	Endangered Species Act. 16 USC 1531 et seq. 50 CFR 17	Actions authorized, funded, or carried out by federal agencies may not jeopardize the continued existence of endangered or threatened species or result in the adverse modification of species' critical habitat. Agencies are to avoid jeopardy or take appropriate mitigation measures to avoid jeopardy.	Applicable to remedial actions that may adversely impact endangered or threatened species or critical habitat that are present at the site.